

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2004/004147

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G01R31/06 G01R31/34 G01R31/12 G01R31/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 814 998 A (SCHIMMELPFENNIG GERHARD ET AL) 29 September 1998 (1998-09-29)	1,2,4,5, 7,21
Y	column 1, line 6 - line 10 column 2, line 48 - column 5, line 10; figures 1,2,3a,3b	3,6,8
X	US 2002/014890 A1 (COOKE CHATHAN M) 7 February 2002 (2002-02-07)	1,2,4,5, 8,21
Y	paragraph [0001]; figures 1,2 paragraph [0019] - paragraph [0030]	8
X	EP 0 805 355 A (HORSTMANN GMBH DIPL ING H) 5 November 1997 (1997-11-05)	1-6,21
Y	column 5, line 49 - column 7, line 59; figures 4,5	3,6
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

3 November 2004

Date of mailing of the international search report

16. 11. 04

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 570 231 A (BUNCH RICHARD H) 11 February 1986 (1986-02-11) abstract; figure 1 -----	1,21
X	SEDDING H G ET AL: "A NEW SENSOR FOR DETECTING PARTIAL DISCHARGES IN OPERATING TURBINE GENERATORS" IEEE TRANSACTIONS ON ENERGY CONVERSION, IEEE INC. NEW YORK, US, vol. 6, no. 4, 1 December 1991 (1991-12-01), pages 700-706, XP000275156 ISSN: 0885-8969 the whole document -----	9-20
X	EP 0 408 813 A (CAMPBELL STEVEN R) 23 January 1991 (1991-01-23) cited in the application column 3, line 54 - column 9, line 6; figures 1-7 -----	9-20
A	YONG-JOO KIM ET AL: "A partial discharge coupler for global VPI (CGVPL) rotating machines" CONFERENCE RECORD OF THE 2002 IEEE INTERNATIONAL SYMPOSIUM ON ELECTRICAL INSULATION. (ISEI 2002). BOSTON, MA, APRIL 7 - 10, 2002, INTERNATIONAL SYMPOSIUM ON ELECTRICAL INSULATION, NEW YORK, NY : IEEE, US, 7 April 2002 (2002-04-07), pages 19-22, XP010588786 ISBN: 0-7803-7337-5 the whole document -----	9,18
A	US 5 530 364 A (MASHIKIAN MATTHEW S ET AL) 25 June 1996 (1996-06-25) column 3, line 28 - line 41; figures 6,7 column 6, line 54 - column 7, line 19 -----	9,18
A	WO 00/42444 A (BARCLAY ANDREW LESLIE ; GREGORY BRIAN (GB); BICC GEN UK CABLES LTD (GB) 20 July 2000 (2000-07-20) page 4, line 3 - line 29; figure 1 -----	9

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Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See additional sheet.

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

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The International Searching Authority has determined that this international application contains multiple (groups of) inventions, namely

1. Claims 1-8, 21

measuring apparatus and method of locating a partial discharge.

2. Claims 9-20

design of a sensor that is suitable for detecting partial discharges.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5814998	A	29-09-1998	DE 29518286 U1 JP 9145773 A	18-01-1996 06-06-1997
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